Journal of Automated Reasoning **4** (1988)

Contents to Volume 4

Volume 4 No. 1 March 1988

Publisher's Announcement v

JAAKKO HINTIKKA / Model Minimization – An Alternative to Circumscription 1

ALAN BUNDY and LEON STERLING / Meta-Level Inference Two Applications 15

PAUL HELMAN and ROBERT VEROFF / Designing Deductive Databases 29

F. OPPACHER and E. SUEN / HARP: A Tableau-Based Theorem Prover 69

Basic Research Problems:
LARRY WOS / The Problem of Finding a Strategy to Control Binary Paramodulation 101

Errata:
Adnan Yahya and Lawrence J. Henschen: 'Deduction in non-Horn databases', *J. Automated Reasoning* **1** (1985) 141–160 109

William McCune and Larry Wos: 'A case study in automated theorem proving: finding sages in combinatory logic', *J. Automated Reasoning* **3** (1987) 91–107 110

Books Received 113

Announcements 115

Volume 4 No. 2 June 1988

ROBERT S. BOYER and J STROTHER MOORE / The Addition of Bounded Quantification and Partial Functions to a Computational Logic and Its Theorem Prover 117

MAREK ZAIONC / Mechanical Procedure for Proof Construction via Closed Terms in Typed λ Calculus 173

MELVIN FITTING / First-Order Modal Tableux 191

Basic Research Problems:
LARRY WOS / The Problem of Explaining the Disparate Performance of Hyperresolution and Paramodulation 215

Problem Corner:
ART QUAIFE / Automated Proofs of Löb's Theorem and Gödel's Two Incompleteness Theorems 219

Book Review:
Larry Wos: *Automated Reasoning: 33 Basic Research Problems* (ROSS OVERBEEK) 233

Errata:
F. J. PELLETIER / '75 Problems for Testing Automatic Theorem Provers, *J. Automated Reasoning* **2**, 191–216 (1986) 235

Volume 4 No. 3 September 1988

SHANG-CHING CHOU / An Introduction to Wu's Method for Mechanical Theorem Proving in Geometry 237

SIDNEY C. BAILIN / A λ-Unifiability Test for Set Theory 269

DAVID A. PLAISTED / Non-Horn Clause Logic Programming Without Contrapositives 287

Basic Research Problems:
LARRY WOS / The Problem of Self-analytically Choosing the Set of Support 327

Problem Corner:
DEEPAK KAPUR and HANTAO ZHANG / Proving Equivalence of Different Axiomatizations of Free Groups 331

Volume 4 No. 4 December 1988

MARK E. STICKEL / A Prolog Technology Theorem Prover: Implementation by an Extended Prolog Compiler 353

URSULA MARTIN and TOBIAS NIPKOW / Unification in Boolean Rings 381

KENNETH A. ROSS and RODNEY W. TOPOR / Inferring Negative Information from Disjunctive Databases 397

KLAUS HEJE MUNCH / A New Reduction Rule for the Connection Graph Proof Procedure 425

LEONARD G. MONK / Inference Rules Using Local Contexts 445

Basic Research Problems:
LARRY WOS / The Problems of Self-analytically Choosing the Weights 463

CONTENTS TO VOLUME 4

Problem Corner:
HANS-JÜRGEN BÜRCKERT, ALEXANDER HEROLD, DEEPAK KAPUR, JÖRG H. SIEKMANN, MARK E. STICKEL, MICHAEL TEPP, and HANTAO ZHANG / Opening the AC-Unification Race 465

Author Index to Volume 4 475

Subject Index to Volume 4 476